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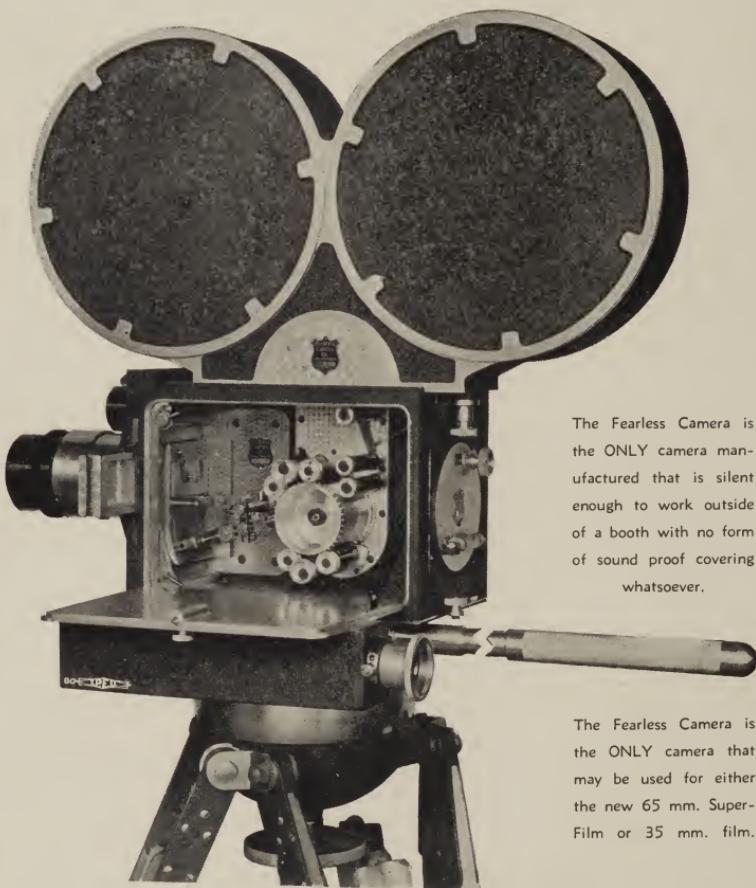
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Var god omtala den Cinematographer in skrivning till annonsers.

(Right) Bell & Howell master craftsman using measuring projector in which the greatly magnified contour of the teeth of a cutting tool is projected upon a large scale drawing of the tool for accurate measurement. (Below) Close-up of cutting tool in measuring projector.



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The Men Who

When Opportunity Knocks the

by WILLIAM

to motion pictures has introduced no radically new principle in the art; actors in silent pictures have always read lines in their scenes, and directors have always coached them in their lines as well as in their pantomime. Motion pictures always have been, and always must be made essentially with the camera. And as long as the director is the dominant factor in making pictures, he must know the language of the camera.

And of all the members of a motion picture unit, who is more perfectly conversant with this language of the camera than the cinematographer? He has devoted the best years of his life to learning it, to telling stories through the medium of lens and film. He has worked under almost every conceivable circumstance, and with

directors of every school. As his experience has increased, he has, in most cases, very frequently saved the pictures of directors less versed in cinematics than he. And, in addition to his knowledge of the artistic side of cinema production, he has, through his long years of experience, gained an enviable knowledge of the economic side of the business. He knows where and how money can be pared from production costs; how schedules can be best arranged for speedy and economical shooting; and—more important than anything else—he knows how to get the greatest production value out of the smallest expenditure.

THERE is no gainsaying the fact that the motion picture industry is passing through a critical period in its development. Even without the accelerating aid of the country's general industrial depression, it was bound to come. Talking pictures could not forever remain a novelty to the public. Once their novelty wore off, public patronage could not be expected to continue unimpaired unless a very high degree of entertainment value were present to encourage that patronage.

Thus the producers find themselves faced with a very difficult situation, for not only must they make their pictures more completely entertaining than ever before, but they must also produce their pictures in a far more efficient manner than ever before, to offset the greatly increased production and marketing costs of sound pictures. To their credit, be it said that they are rising magnificently to the challenge. The astute minds that built up today's great producing organizations are equal to the task of preserving them. Since they are selling entertainment, and highly specialized entertainment at that, they realize that the best solution of their problem is to place the production of that entertainment in the hands of men whose specialized training has best fitted them to produce it. Therefore, now that the last two years' influx of stage-trained writers and directors is disappearing, the industry is again turning to the screen-trained personnel who must inevitably form its backbone. For a motion picture cannot be written, nor can it be directed in the sense that a play is; it must be made with a camera, and by people whose eyes and minds are attuned to the cinematic pitch. Talking or silent, the screen speaks with a language all its own, and the only ones to effectively and efficiently phrase its speech are those whose years of screen training have thoroughly schooled them in the cinematic idiom. The addition of speech



George Hill



Left, Phil Whitman, A. S. C., and
James S. Brown, Jr., A. S. C.

Do Not Fail..

Cameramen Prove Their Ability

STULL, A.S.C.

Who, then, is better suited to assume the responsibilities of the director, and answer the producer's cry for better pictures at less production cost?

Hollywood's executives have not been blind to this situation. Time and again they have chosen new directors from the ranks of the cameramen; never has their judgment been wrong. The directors who had the incalculable advantage of thorough camera training at the outset of their screen careers have made for themselves records that remain unexcelled in the industry. Few, if any, of them have failed, and the great majority of them have displayed a marvellous knack of turning out pictures which are at once artistic and financial successes. Furthermore, some of them have been responsible for many of the outstanding pictures of all time.

One of the first of these men to come to mind is Victor Fleming. He is a perfect example of the surprising versatility of the expert cinematographer, for he is not only a great director, but an expert cinematographer and aviator as well. His entry into pictures was by the familiar laboratory route, for he began as a laboratory assistant at the old American Studios at Santa Barbara. He paused there only long enough to become acquainted with cinematic and laboratory technique, and soon graduated to a camera, being responsible for the photography of many famous



Victor Fleming

successful pictures as "The Blind Goddess," "Lord Jim," "Man Trap," "The Rough Riders," "The Way of All Flesh," "Abie's Irish Rose," "Wolf Song," "The Virginian," and, most recently, "Common Clay."

Another equally distinguished cinematographer-director is George Hill. Like many another cinematographer, Mr. Hill was a trained Civil Engineer before entering pictures. But in 1908 his interest in things cinematic outweighed his interest in engineering, and he joined the old Biograph Company as an assistant stage-hand. He soon graduated to a camera, however, photographing many pictures for the "old master," D. W. Griffith. Thereafter, for a period of nine years he continued as a cinematographer, photographing many outstanding pictures for such famous old firms as Biograph, Kalem, Bosworth, Triangle, and Goldwyn. Eventually, however, the executives of the Fox Company, who seem to take a special interest in discovering promising directorial material among the camera profession, gave him the opportunity to direct. So successful has he been in this work

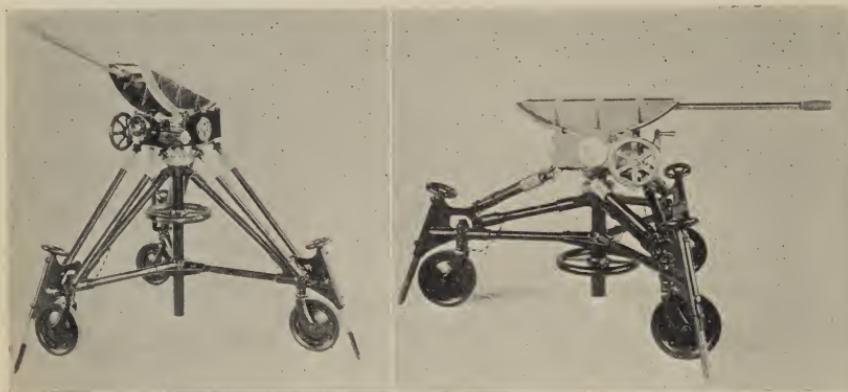
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Clarence Badger



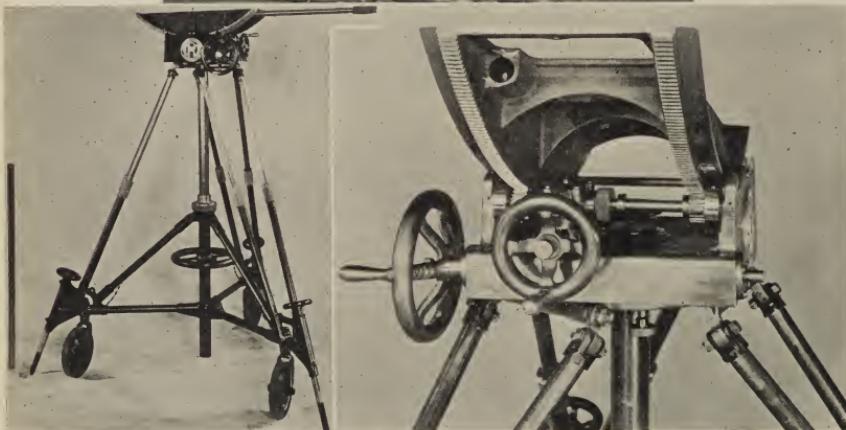
Phil E. Rosen



Above
Fig. 1.
Rolling tripod,
Low position



Above
Fig. 4.
Auxiliary
Low Tripod



Center, Fig. 5. High-hat showing adjustable section. Lower left, Fig. 2. Rolling tripod,
high position. Lower right, Fig. 3. Detail of tilt head.

Tilt Heads and Rolling Tripods for Camera Blimps

by ELMER C. RICHARDSON

(Mole-Richardson, Inc., Hollywood, California)

THOUGH there has been considerable progress made in silencing the movements in motion picture cameras, there are not at present available many cameras sufficiently silent, so that they may be used without the additional sound-proofing of a camera booth, or with what we term a "blimp" or "bungawlow" camera housing.

Sooner or later camera manufacturers are going to offer the industry a camera so silent that it can be used with every facility which cameras previously used in silent pictures; however, at present the sound departments of most studios are resorting to the use of blimps as the best means to meet the present situation.

There has been a lot of experimentation with these sound-proof devices. For instance, some blimps have consisted of a simple padding or quilted cover attached to the camera by means of snaps or zippers. These sound-proofings are popularly called "horse-blankets." Other blimps have been constructed of plywood or masonite cases, lined with sponge, rubber, felt, and many other insulating materials.

When the writer left the West Coast, the most popular "blimps" were a construction embodying an aluminum external housing, lined with insulating felt and in some cases with lead. I believe another paper has been written with respect to these developments.

At first these blimps were mounted on ordinary camera tripods, and in the case of the horse-blankets the addition of the sound-proofing, which did not add much weight, did not present a serious problem. These heavier "blimps" which are now looked upon with favor, weigh approximately 260 pounds with

the loaded camera, and are too heavy to be supported by either a standard tripod or a standard tilt head.

To meet this situation, there has been introduced a rolling tripod, which in combination with a special tilt head, as shown in Fig. 1, gives the cinematographer almost the same latitude with the heavy blimp and camera that he formerly had in the days of silent pictures.

As you will note in the illustration, the tripod is mounted on rubber-tire casters, which may be locked into line for "perambulator" shots, or left free as desired. At the supporting points leveling screws are provided with which the tripod and camera may be lifted off the casters and leveled. These leveling screws were given an angular inclination which has provided a very rigid support.

The tilt head is supported upon a central telescoping tube system, and by means of a hand-wheel may be elevated or lowered. Fig. 1 shows the tripod in the low position and Fig. 2 in the high position. Supplementary telescoping struts extend from the base to the tilt head, which may be locked by means of clamping sleeves.

Mounted upon this supporting structure is a tilt head which is better illustrated by the detail in Fig. 3.

As you will note, the blimp is mounted upon a table, which in turn rolls upon rails which are sectors of a circle, the radius of which centers at a point coinciding approximately with the center of gravity of the blimp. By this method of support, the blimp and camera are in equilibrium in all positions of tilt.

When free tilt is desired, the knurled clutch knob shown under the table is shifted to the right, which

(Continued on Page 30)



Fig. 6. Rolling Tripod modified for lighter blimps.

Practical Aspects of Film Recording

A Paper from the Technical Digest of the
Academy of Motion Picture Arts and Sciences

by A. W. DE SART

APRACTICAL consideration of recording is not complete without dwelling on the film itself.

Before the microphones begin to function, it is a matter of outstanding importance that the right sort of stock be selected for recording.

Positive stock is used for recording purposes. This type of film is characterized by a fine-grained emulsion that is sensitive mostly to blue, slightly to green, and very little to yellow.

The celluloid base of this form of raw stock should be, for recording, optically plane and extremely clear. Dirt, scratches or coloring in the celluloid will cause various noises when such affected areas pass the photoelectric cell. If the celluloid is not optically plane, there will occur refractions which also give rise to noise.

Likewise, the emulsion must be in a very even layer. Variations in the minute depth of the emulsion bring kindred variations in sound qualities. The grains, which comprise the emulsion, must be very fine; the finer the grain, the sharper are the lines which record sound on film.

Studio laboratories are ordinarily concerned only with the length of development and keeping the developing fluid at its full strength. The reducing agent furnished by the manufacturer of the film is ordinarily used. The process of development is the reduction of a silver halide emulsion to grains of silver. As the manufacturer of the film keeps his emulsion formula secret he is in the best position to know the formula which will best complete the reduction.

In the variable density method of recording on film the exposure is made by a light valve, the light passing through a slit 1 mill wide by 100 mills long. Except in news reel cameras the sound track is originally recorded on a separate film from the picture.

As the sound track requires special treatment, it is also developed by itself and then put alongside the picture.

The development of the sound track is, of course, very important. Whereas the photography of the picture is to be developed only for clearness and to secure an artistic level of brightness, the sound track development must be extremely exact. The relationship between exposure and development is particularly important in the variable density method.

The test strip check on development is familiar to all photographers. Strips of film with varying exposures are left in the developing fluid for different lengths of time. A comparison with the strips will thus serve as a check during the developing process. The gamma control used for sound track is simply a refinement of the test strip check. The contrast is measured by an optical instrument instead of the eye.

When the contrast is too high the little detail lines of high frequency sound are lost. The bass is heavy and the higher sounds distorted. When the contrast is too low there is little volume in the bass and while the higher tones are of fair quality they also lose in volume.

Every method of sound recording has, of course, advantages and disadvantages. Disc recording for instance uses comparatively direct and easily measured mechanical means for translating sound to the record.

The chemical steps in film development are complex but, when the film is once in synchronism it is not easily thrown off.

One useful characteristic of sound track on film is that it can be handled almost as easily in the cutting room as the picture itself. It is possible to select the best parts from several different "takes" of a scene and cut them together without dubbing.

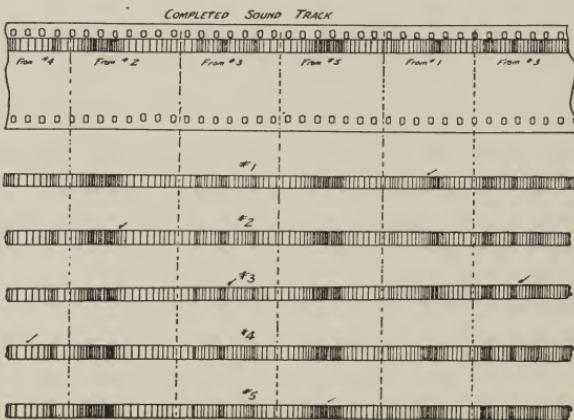


Figure 1

Fig. 1 is a rough sketch of different sound tracks, all covering the same scene. Track 7 shows how the best parts of the different tracks assembled to secure the best quality. Of course, this does not apply to musical sound track because a note might be split in half, but in straight dialogue the film can be cut at the pauses or silent spots. It is even possible to take parts of syllables of a word and cut them together.

The dummy gun of a battleship on the stage need only spurt a small charge of black powder. The actual roar of a coast defense gun recorded previously and filed in the library can be cut in at the right place.

Another useful characteristic of sound on film from the laboratory standpoint is that the sound level can be regulated about 6 or 8 db in the printing process. The level among scenes shot at different locations and times will vary slightly. The laboratory control of level is often an important asset.

A double monitoring system provides additional control over sound recording on film. As the light passes through the film in the recorder it falls on a photoelectric cell which again converts it into electric impulses. These are amplified to a horn in the monitor room. This gives the mixer an overall check on his recording equipment: microphone, amplifiers, and spacing and tuning of the light valve. As the mixer has a direct monitoring system also, he can compare the overall quality with the sound taken from the bridging amplifiers before it strikes the valve.

For the proper maintenance of our film recorders it was found necessary for the sound department to receive the sound track with picture direct from the laboratory; that is, the sound department representative sees the picture and hears the sound track before directors, cutters, etc. Some one in our sound department sees and hears all takes of every scene and from every recorder on one projection machine that is carefully maintained to give good quality. This gives a practical test every day on the operation of each recording machine. It has been found that some one machine may make ten or twenty takes and then possibly a poor one. Of course, it is necessary to have the picture with sound track in order to see that the sound has the proper perspective. It is rather hard to judge sound except with the picture to judge whether it is the right volume and quality. For instance, sometimes volume goes extremely high or extremely low. By watching the picture this can be caught if it was unintentional. The film inspectors daily find something that should be reported to the recording department and this practice has been a great help in reducing the number of recording failures which now occur very seldom.

Another thing that is extremely important to the sound department, and also to the employees of the studio who judge sound track, is the testing of each one's ears. It has been found that some individuals can not hear many high frequencies, also they are slightly deaf. Some of them have very sensitive hearing—hearing as high as frequency as 20,000 cycles per second. The person with the type of ear which hears such high frequencies can detect and will be very much annoyed by raspiness or distortion. The person who cannot hear the high frequencies so well usually likes a recording that has lots of high fre-

quencies whether good or not, claiming it is more pleasing, because, he cannot hear distortion in this range. Therefore, it should be the duty of every sound department to test the ears of every individual who is called on to judge sound including every studio executive, who should know whether he is capable of judging sound track that is pleasing and satisfactory to the public in the theatres. This information should be on file so that individual criticisms of sound can be interpreted intelligently.

This program amounts to calibrating the ears of every individual concerned so that he can use them as an instrument, knowing his limitations to further the art of sound recording.

The movietone print or sound and picture on one film has the advantage that the sound can not get lost in the many handlings between release and the projection machine. Disc records on the other hand are liable to breakage, projectionists mix discs or lose them and the record itself has a very short life before it must be replaced by a new one. When movietone prints are used and the projectionist gets the correct loop in his machine the picture can not go out of synchronism unless it was printed that way on the original negative.

On our first picture, "Wings," we were very much afraid of the theatres damaging the sound track. As that was very early in the sound picture era the picture was on one film and the musical and sound effects accompaniment on another. After these double prints had been sent out for some time it was found that the sound track was just as long-lived as the picture, as the sound track film did not go through an intermittent mechanism and was not submitted to the heat of the arc. Of course in the now general movietone print where the sound and picture are on the same film track does get the heat and intermittent jerk. Nevertheless unless very badly abused the life of the sound track is virtually as long as that of the picture. Small scratches on variable density sound track have almost no effect on the sound.

While new inventions will improve talking pictures in the future it is a fact that the quality of recording is considerably better than that of reproduction at the present time. If theatre projectionists would take better care of their equipment talking pictures would be even more popular than they are. In the studio we keep about fifty reproducers of the latest improved type in the best of condition. All pictures are run on this equipment many times before release. If theatres would avail themselves more frequently of the services of the equipment manufacturing company engineers and follow instructions to the letter there would be less difference between sound as recorded and as reproduced.

Along with the advance of technique there will need to be an ever closer association of the different departments in production if talking pictures are to reach their highest development. Sound recording is a new department in the motion picture industry and is not very well understood by those in other departments. As directors, assistant directors and cameramen understand clearly why the sound department asks for certain conditions they will be more than glad to cooperate fully.

Rosher Returns from England

AFTER an absence of nearly two years, Charles Rosher, A. S. C., has just returned to Hollywood from England. An Englishman by birth, Mr. Rosher has for more than twenty years been one of the outstanding figures of the American cinema profession. He was one of the Charter Members of the American Society of Cinematographers, and served for several terms as that Society's Secretary, during his long period of activity in American studios. For many years he was associated with Mary Pickford as Chief Cinematographer, photographing the majority of her many successes. Eventually, however, he succumbed to the call of his native land, and joined the forces of British International Pictures, Ltd.

During his sojourn in England he was continuously with British International, working both at their studios at Elstree, Hertfordshire, and in Paris and Berlin. Among the more noteworthy of the many productions for whose photography he was responsible in this period are E. A. Dupont's powerful film, "Atlantic," which has been hailed by European critics as the greatest talking picture thus far produced, and Elinor Glyn's first talking production, "Knowing Men," both of which are shortly to be released in this country.

Unlike many American observers, who have too often painted a rather dismal picture of foreign production conditions, Mr. Rosher is highly optimistic. "Naturally," he says, "production in Europe is on a considerably smaller scale than it is in this country, but it is not by any means of lower quality. To those who, like myself, are accustomed to the almost

constant activity of the American studios, the comparatively large number of really skilled workers who manage to survive the somewhat intermittent production conditions of the European film industry is a never-ending source of amazement. There are many highly-skilled artists and artisans in every department of production. The best of them are in every way equal to their counterparts in the American studios; in some respects, I sometimes feel that they are even more skilful, for they are able to do so marvelously well with so comparatively little in the way of physical equipment or financial resources. Over here, for instance, a budget of \$350,000 is considered only a nominal amount for an average film: in Europe, however, £60,000 (\$300,000) is, as a rule, the maximum that can be expended for even a "special" production. Of course, there is a certain difference in the relative purchasing power of such sums on the different sides of the Atlantic, but, even so, the achievements of the directors and technicians in turning out really excellent pictures on such limited resources is nothing short of remarkable.

"The physical equipment of the larger British studios—like B. I. P.'s Elstree plant, where I was, is, however, remarkably fine. There is, for instance, a wealth of lighting equipment available: familiar American products, like Mole-Richardson "Inkies," and Creco Arcs, mingled with a great variety of both British and German units, many of which could be used to great advantage in this country.

(Continued on Page 26)



Elinor Glyn and Technical Staff at the Elstree studios. Mr. Rosher is seen at extreme right.

Daddy of the Prologue

Larry Ceballos Airs Some Views

by HAL HALL

LARRY CEBALLOS has been called the daddy of the theatre prologues and musical picture choruses, but he ought to be called the good samaritan. Ever since the brilliant dancing maestro arrived in Hollywood some four years ago to win local fame for his novel Doll Dance and Serpentine in the Music Box Revue, he has been leading the way. His were the first sensationaly successful theatre prologues, his were the first spectacular musical picture chorus ballets, and now he is back to revive the faltering theatre with prologues which surpass in sensation and entertainment anything he has previously achieved. Like Paul Whiteman in the musical field, Ceballos is always sure-fire to keep in the foreground.

It was an astute move on the part of Warner Brothers to bring Larry Ceballos back to the theatre world, which was rapidly going stale as far as patronage went.

Whether or not this move is to be permanent is something none in this changing picture world can say. However, the results have again proven that Ceballos is a box-office winner either in pictures or theatre.

The Warners are some thirty big productions ahead on their own and First National schedules so "Doctor" Ceballos was shot into the breach at the theatres. A tough spot to be in, after eighteen months of exceptionally hard work in developing chorus numbers and ballets for pictures. But the resourceful Ceballos not only made the grade, he excelled himself. His prologues, which are now running at both the Warners' Hollywood and Downtown theatres, have been enthusiastically acclaimed by the critics as lifesavers for the stagnant theatres.

We found Ceballos where one would expect to find

him, back stage at the Forum Theatre rehearsing his third and alternate prologue. It was four o'clock in the afternoon, and he had just enjoyed his breakfast at a counter across the street. And, he had been rehearsing since nine in the morning. Simply explained that he had forgotten to eat. After watching him forget the rest of the world when he is concentrating on a rehearsal, even forgetting his interviewer, one can appreciate that this man is on the job.

"We have arrived at the happy medium in dance production," Ceballos avers. "Henceforth, we shall have a more suitable division of dancing numbers, between the pictures and theatres. To a certain extent, dancing ballets were overdone in last year's crop of pictures. Spectacle and gorgeous color are necessary for background at times in all musical productions, screen as well as stage, but the delightful intimacy of the individual artists should never be sacrificed for spectacular effects. Although the revue type of entertainment is dead, I firmly believe that chorus numbers will always prove popular when they are a logical part of the musical comedy and operetta story. The charm of intimacy is almost as necessary in presenting chorus numbers as it is in individual performances."

Here Ceballos touched upon the very keynote to his own dance production popularity. Master of

dazzling spectacle and gorgeous color effects that he is, he never once fails to feature clever specialty artists throughout his prologues.

Resuming his subject, Ceballos said, "I for one am delighted that public demand has forced the return of theatre prologues. The stage has been in the doldrums for a long time, and I believe these miniature revues will serve as a tonic for the stage. (Con't. on P. 41)



Mr. Ceballos Training a Chorus



Better Pictures

THE TERRIBLE howl regarding falling off of business at the motion picture theatre box offices is still ringing from coast to coast. One chain of theatres is reported to have taken a \$480,000 loss in one week last month. All of which is not so pleasing to the ears of those in the motion picture game, in any department.

It would seem to this humble writer that this attitude of the great American public should be sufficient tip to the producers that the pictures are not entertaining enough to draw. The public will pay its good money to see anything that is entertaining, whether it be a motion picture or a woman who threw sixteen plates at her husband's head without missing a throw. There are some pictures that are making money. Take, for example, Universal's "All Quiet on the Western Front." Wherever it shows the public deserts the miniature golf courses and trots into the theatre. That should be sufficient answer to stir the producers to action. Give the public good pictures and the public will pay.

The chief trouble seems to lie in the apparent fact that producers have relied too much on the novelty of sound. They seem to forget that sound is no longer a novelty, and that sound has brought about a situation which demands more than the mere story idea which used to go over when a title writer could take hold of the finished picture and put life into it via the smart-cracking title route. In the old days if the picture did not measure up to expectations and the title writer could not quite make it into something sensible, all that was necessary was to shoot a few more feet of this or that and cut it in with a few beautiful closeups—and there it was.

Today it is different. The players are talking, and they must say something as they progress with the picture. If what they say lacks punch and convincingness it is just too bad, and we have another picture that sends us away from the movie palaces swearing we shall never go see another picture. That seems to be at the bottom of the present box office drop. This writer has sat recently in picture theatres and listened to the most deplorable dialogue imaginable. Terrible stuff! Childish! Awful!

In the world of the stage a good playwright will spend a year in creating a play. It takes almost that long to turn out a play that is a success. Why? Because there must be convincingness and entertainment in the words spoken by the players. And this cannot be accomplished in slipshod and hurried manner. The turning out of the stories and the revamping of them into script form with the necessary dialogue for talking pictures is being rushed after the manner of the old silent days. It cannot be done. And the sooner the producers discover this, the sooner they will give us better pictures and the sooner the box office receipts will again swell. The day of shooting

a picture off the cuff is past. They must be built now, and the public will respond when this is done and we are given pictures that tell a convincing and entertaining story in a convincing and entertaining manner.

Congratulations

NO ORGANIZATION is stronger than the officers who guide it. This has been proven throughout the years, and is as true today as it was a hundred years ago.

For this reason the coming year should be an outstanding one for Local 659, I. A. T. S. E., for in the selection of their officers for the year the members have chosen a splendid group, and we wish to take this opportunity to extend the congratulations of the A. S. C. to the men who chose so wisely. Many an organization has fallen to pieces or been afflicted with dry rot because of the men who were guiding it. But we know, knowing the men who are leading Local 659, that such will not be the case in this instance; and we look forward to seeing the Union marching on to still greater success with these men at the helm.

Cinematographic Annual

WELL, the Cinematographic Annual is at last being delivered.

We take this opportunity to offer our apologies for the delay. But, in the same breath, we hasten to add that we would rather be late and produce a book that is worthwhile, than rush through with it and turn out "just another book." And we feel that we have brought out a book that is a distinct contribution; a book that will be invaluable to professionals and amateurs alike. However, we leave that to our readers to judge.

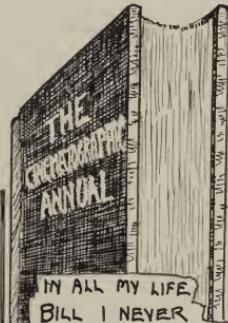
With the publication of this book, the American Society of Cinematographers, and the AMERICAN CINEMATOGRAPHER, we feel, have planted another outstanding milestone in the path of progress that this organization and its magazine have been climbing for the past ten years. The A. S. C., established with the idea of espousing the cause of progress and art in motion picture photography, has been one organization that has never swerved from its well defined plan. Progress is a watchword in the organization, and in producing the Cinematographic Annual the society was inspired by the same idea that was behind the work of its members when by untiring effort it was mainly responsible for the solving of the light problem for talkies—the introduction of incandescents.

Mr. Kershner's cartoon on the opposite page graphically portrays the progress of the society during these years, and speaks more than we could say in a volume.

H. H.



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PROGRESS 1923 1924 1925 1926 1927 1928 1929 1930

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LOOK AT THE SIZE
OF THOSE BOOKS
UP THERE

GLENN R. KERSHNER
A.S.C.

Making Up for Color

Some Valuable Information from an Expert

by MAX FIRESTEIN

AS AN ART make-up, like all other arts, is the expression of one's skill and natural aptitude. On the stage this art is assisted greatly by the human element and imagination of the audience, which bears with the performer and visualizes the character being portrayed. But with the screen the problem is much greater; the characterization must be lifelike and exacting, as the camera does not register anything that does not actually exist. It is as unselective and unaccommodating as Nature itself—the only difference is that it reduces the full play of natural colors to gradations of black and white. The result is that the best cinematographers, in order to produce good photography, are forced to become trained observers of the degree of light and shade in any given subject. They must display their craftsmanship in the control they exercise over the camera and lights, arrange their sets and people in the best possible manner, in order to obtain the best results.

Light plays an important part in photography, and since intense lighting is necessary, make-up becomes very significant. Since we know that light has a tendency to absorb its own color properties, it becomes necessary to use make-up with sufficient color intensity to offset the absorption of the light. Make-up, therefore, becomes the greatest ally to cinematography. To this end Max Factor has created and developed, under the most modern and scientific principles, make-up that registers lifelike characterizations on the screen. The task has been a difficult one, and the problems many. In the many years of Mr. Factor's experience and connections with the Motion Picture Industry, the development of Panchromatic Make-up is considered his most important achievement.

The colors for Max Factor's Panchromatic Make-up were the result of experiments held at Warner Brothers' Studio in Hollywood early in 1928, under the auspices of representative bodies interested in advancing the artistic values in motion picture production, in which the American Society of Cinematographers played an important part. The different colors of make-up used up to that time were tested with modern lighting devices under various conditions. Here Panchromatic Film was introduced, a film sensitive to all colors, recording them in their true, harmonious relations, and eliminating those sharp, hard contrasts so common with the use of the old-time orthochromatic film.

This occasion marked the introduction of Panchromatic Make-up, so named to identify it with the new film which made the improvement possible. Since then, this make-up has given the screen per-

former a standard range of complexion tones that balances, and which can withstand the color absorption properties of every lighting device. Further, it enables the cinematographer to attain more natural and desirable results.

It might be well at this point to mention some of the important uses of make-up with respect both to performer and cinematographer.

1. Disfigured faces and objectionable blemishes, since they are magnified by the camera, may be rendered invisible, or at least subdued, by the correct use of make-up.

2. The natural contrasts which give tone and color to a complexion are lost in the photographic process. The adjustment is easily made by the use of color in make-up.

3. Faces that have become tanned and sunburned can maintain their true characterizations throughout the making of a picture with the use of make-up.

4. During the making of a picture the strain of hard work and long hours may show its signs. Make-up subdues these evidences of fatigue and permits the original characterization to go on unchanged.

Following this event, new make-up problems soon became apparent in the industry. Colored pictures were taking a strong foothold, and while they had been in the experimental stage for quite some time, Mr. Factor was keeping in close touch with this movement from its very inception. That the industry would accept the process of producing motion pictures in natural colors was only a question of time, for after all, we are all interested in seeing objects reproduced in their natural colors.

We will not at this time go into a discussion of the technical features of the color camera which produces two images practically simultaneously while the camera is producing one in black and white. What we are mostly concerned with is the value of make-up as it is related to the making of pictures in natural colors.

First of all, we will take into consideration the filters used in the camera. These filters are red-orange and blue-green, making it necessary that the make-up used shall be in harmony, so that the images recorded on the film can again be produced in their correct colors. The colors of make-up used as a ground tone must be complementary to the colors used for the cheeks, more commonly known as rouge, and those used for the lips. The image reproduced through the red-orange filter accepts the ground tone color, but eliminates the cheeks and lips, due to the

(Continued on Page 28)

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The Men Who Do Not Fail

(Continued from Page 9)

that he is now numbered among the outstanding directors of the screen. Among his directorial achievements have been such pictures as Mary Pickford's "Suds"; Marion Davies' "Zander the Great"; Lon Chaney's unforgettable "Tell it to the Marines"; "The Cossacks"; "The Flying Fleet"; and now "The Big House", which bids fair to become the year's greatest screen success.

Clarence Badger, who is certainly one of the most versatile and consistently successful of directors, also began his screen career behind a camera. Everything that comes his way seems to be grist for his mill: drama, comedy, farce, or romance—he seems to have an equal success with each. But unquestionably his special *flair* is for light comedy. More than almost any other megaphone-wielder, he seems able to take the lightest, frothiest material and turn it into surpassingly entertaining screen fare. The long succession of such pictures which he has made with Clara Bow and Bebe Daniels is proof of this: among them are such memorable bits of entertainment as "It", "Senorita", "Man Power", "A Kiss in a Taxi", "Swim, Girl, Swim!" "She's a Sheik", "Red Hair", "The Fifty-fifty Girl", "Hot News", "Three Weekends", and "Murder Will Out". But he is no less successful with other story material, as his more recent pictures, "Paris", "The Bad Man", "Woman Hungry", "Sweethearts and Wives", and "The Hot Heiress" prove.

Irvin Willat, whose most recent film was "The Isle of Lost Ships", is most particularly a proof of the cameraman's ability to turn out financially successful pictures. He began his screen career behind a camera, and so well did he learn the lessons it taught that since he became a director he has been able to boast that he has never made a picture which did not do exceptionally well at the box-office.

Bert Glennon, A. S. C., is another man whose achievements as a director are only equalled by his achievements with the camera. For after having been Paramount's "ace" cinematographer for many years, during which time he photographed such famous films as "The Ten Commandments", "Hotel Imperial", "Forbidden Paradise", and many others, he, too, turned to directing, to make an equal success with both silent and sound films, such as "The Perfect Crime", "Gang War", "Syncopation", "The Air Legion", and "The Girl of the Port".

The Darmour Studio, from whence come R-K-O's remarkably successful comedies, is a veritable nest of ex-cameramen. Larry Darmour, the head of the organization, is himself a former cinematographer, and once the Gaumont Newsreel's "ace" reporter, during which work he "covered" such famous events as Henry Ford's celebrated Peace Ship. In the comparatively few years during which he has been a producer, he has fought his way up from the status of a struggling independent to the position he now occupies, producing one of the very few programmes of talking comedies which are consistently successful and profitable alike for producer and distributor. But no small share of this success must be due to his pro-

duction manager, James S. Brown, Jr., A. S. C., who has the difficult task of keeping the studio machinery turning smoothly. If there is any doubt as to the fitness of the cinematographer for such executive posts, the doubter should visit the Darmour Studio on a busy day. Mr. Brown manages to keep his outfit tuned to such perfection that amazingly fine pictures are turned out in a most incredibly short time. During the month of June, for instance, this organization, despite its somewhat limited stage space, etc., turned out the amazing total of six complete two-reel comedies and two feature pictures—a record that many another producer will envy. But there are still other former cinematographers active in this studio, for both Phil Rosen, the A. S. C.'s first President, and Phil Whitman, another A. S. C. member, have been directing there. Mr. Whitman will be remembered by readers of this magazine as one of its former contributing editors, while Mr. Rosen's fame as the Society's first presiding officer is eclipsed by his outstanding directorial efforts in both the fields of feature and comedy production, while his *magnum opus*, "Abraham Lincoln" has been firmly enshrined as one of the great pictures of all time.

And now the latest of the cinematographers to become a director is Daniel B. Clark, A. S. C. Twice the President of that organization and institutor of the famous Mazda Light tests, Mr. Clark has long been recognized as one of the outstanding personalities of the screen world. In selecting Mr. Clark as a director, Messrs. Sheehan and Wurtzel of the Fox organization have again proven their ability to meet such critical situations as now confront the industry, for few men—directors, cinematographers, writers, or actors—are so well fitted to meet today's demand for better pictures and more efficient production as is Dan Clark. His artistic ability is unquestionably second to none in the industry, while his cinematic experience, covering seventy-six consecutive productions for Fox, has given him experience with practically every type of story, direction and production conditions in the industry. His long experience as Chief Cinematographer for Tom Mix has given him an unrivalled knowledge of the Western country, with especial reference to photogenic locations. And during this experience with Mr. Mix, he proved his efficiency in no uncertain way, for he was often called upon to work on three separate pictures at once: making retakes on one, finishing a second, and making the opening scenes of a third, all at the same time. Such working conditions are not, of course, usual, but they are significant, as they demand of director and cinematographer a vastly increased grasp of story values and production methods. After such training, the Fox officials can feel confident that they have chosen well in choosing Dan Clark for a Directorial post. Their answer to the challenge of the industry's grave problem is significant: Talkies or no talkies, motion pictures must still be made primarily with a camera; and the men to make them best and most efficiently are the men who have been thoroughly trained in the use of the camera as a story-telling medium.

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Hollywood Camera Exchange

THE HOLLYWOOD Camera Exchange has just announced its official opening at 1511 Cahuenga avenue, and we take this opportunity to extend our best wishes for success.

Art Reeves and Cliff Thomas are the moving factors in the new concern which fills a place long needed by the Hollywood cameramen; a central place where they may dispose of their extra equipment. Mr. Reeves and Mr. Thomas announce that any cameras and equipment which a cameraman has for sale will be taken by them on a consignment basis and will be disposed of and displayed according to the owner's wishes. As nearly all cameramen have some equipment lying around that they wish to dispose of, this should prove an excellent opportunity for them.

In addition to disposing of equipment, the Hollywood Camera Exchange will handle the rentals of cameras, equipment and motors for those cameramen who have equipment for rent. There are many cameramen who have rental cameras who are too busy to take care of their own rentals. A specialty will be made at the Exchange of handling the rentals for cameramen. A large fireproof film vault is in the Exchange and in it will be stored all equipment, assuring absolute safety.

The Exchange will also carry a complete line of Bell & Howell 16mm. cameras and projectors and amateur equipment; also Kodak films and supplies. A projection room for 16 mm. and 35 mm. with portable projectors is another feature. And—a dark room for loading cameras is another feature offered in the way of service.

"No More Spill-Light" Says Lakin Corporation

IN A RECENT test given for them by Lakin Corporation, manufacturers of "Laco Lites," Ray June, A. S. C., prominent United Artists cinematographer, and William Johnson, chief electrician with R-K-O studios, pronounced the new "Laco" sleeve light-control one of the most important devices ever conceived for use in the modern studio.

Concentration of the light ray is made possible and "spill-light," the bane of most every studio technician's existence, is most entirely overcome when the Laco sleeve light-control is employed.

"It puts the light where you want it," said Mr. Johnson. Ray June in voicing his praises said, "it would prove to be a valuable asset to the industry."

According to Sales Manager Frank Arrouze of Lakin Corporation, the new sleeve light-control will be introduced to the industry August fifteenth.

Warner's 52 Celebrity Shorts

A SERIES of 52 shorts featuring celebrities of the day, are planned by Warner Bros. for production at the Eastern Vitaphone studios. Walter Winchell and Mark Hellinger, prominent newspaper columnists, are the first subjects. The shorts will be turned out at the rate of one a week.

Prominent Electricians Form New Engineering Department

TO FILL an urgent demand for a service that on the west coast has been long neglected, an organization known as The Western Sound Engineers recently was formed by two well known electricians, long associated with motion picture activities.

G. E. MacCormac, former chief electrician of Famous Players-Lasky studios, and Bert S. Hodges, for many years associated with The American Telephone and Telegraph Company, are the personnel of the new firm.

Mr. MacCormac's technical experience and ability are well known to the industry and Mr. Hodges is responsible for the sound development work on "Wings," the first picture with sound effects ever produced.

Western Sound Engineers propose to fill the sound requirements of independent motion picture producers, amphitheatres, motion picture houses, apartments and hotels. They also will install modern address systems.

The inadequate manner in which the requirements of the commercial field are supplied with sound apparatus, prompts Western Sound Engineers to believe that with their experience and knowledge of this work, the same expert sound service that is used today in a number of our larger and more modern motion picture studios can be given by them to all prospective employers of sound equipment.

"We are going to take the 'guess'-work out of sound," said Mr. MacCormac, recently, "and Mr. Hodges and myself are entering the field with a determination to give real service."

Further announcements of The Western Sound Engineers will be made later by them.

Recent Releases of A. S. C. Men

"Paradise Island"—Tiffany	Max Dupont
"Strictly Unconventional"—M-G-M	Oliver Marsh
"Three Sisters"—Fox	L. W. O'Connell
"Wild Company"—Fox	L. W. O'Connell
"For the Defense"—Paramount	Charles Lang
"Animal Crackers"—Paramount	George Folsey
"Common Clay"—Fox	Glen MacWilliams
"Grumpy"—Paramount	David Abel

Carbon Products Company Completing New Lineup

CARBON Products, Inc., importers and manufacturers of carbon products, is the exclusive distributor and importer of Sun-Arc Yellow Seal Regular and Blue Seal Special low intensity carbons. Sun-Arc carbons are said to give a brilliant, even light of depth and definition and burn more economically. Special Blue Seal carbons can be used at higher amperages on low intensity mirror lamps.

The company is now completing its line with carbons for high intensity reflector lamps as well as straight high intensity carbons. Photographic, blueprint and therapeutic carbons are also handled by Carbon Products, Inc.

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"Flight" . . . "Young Eagles" . . . "Going Wild"

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Multicolor Process to Be Available to All
Prospective Users of Color Film

BUILDING operations have begun on the future home and laboratory of Multicolor, Ltd., which is to occupy the site on Romaine, Orange Drive and Sycamore streets. It will embody all facilities for the adequate handling of motion picture film with color.

With the completion of the new establishment, Multicolor will offer the industrial, educational and amateur fields of motion picture photography 35 mm. and 16 mm. film in Multicolor at the lowest price which efficiency, large scale operation and modest profit will permit.

The simple adaptability of the Multicolor process to the Bell & Howell or De Vry cameras and projectors and moderate cost are important features which undoubtedly will encourage greater activity in both the 35 mm. and 16 mm. industrial fields of film production and influence a consistent demand for color on film.

The intention of Multicolor, Ltd., to establish branch laboratories, or to select a number of those already in existence throughout the world for the use of Multicolor, under their supervision, will make the Multicolor process available to all users or prospective users of color film in the Industrial and Educational branches of the motion picture industry.

Multicolor, Ltd., is soliciting inquiries regarding their future activities, from those interested in the vast possibilities offered the Industrial and Educational field, by the Multicolor process.

Movies for Stanford

HERBERT HOOVER'S brother, Theodore, who is dean of the engineering school at Stanford University, says he has never found such cordial cooperation between competitors in any industry he found in the technical departments of Coast studios.

Dean Hoover spent a week here for a studio survey, talking with 36 engineers and sound experts. The contacts were arranged by Lester Cowan, manager of the Academy's Technical Bureau.

Stanford University will adapt its engineering curriculum to cover the new field opened by sound in pictures.

Television for Home

PATENTS covering home television and talkers have been offered by RCA to its receiver licensees with development of the new apparatus expected within the next year. The patents, covering other broadcast receivers, such as super-regeneration, patents on television and on some talkers, are included in the offering, which, it is believed, will do much to bring peace and closer cooperation among allied interests and competitors in the radio industry.

FRANCE—The Society of the Veterans of the Dardanelles Campaigns is planning to make a talking picture record of the pilgrimage it is organizing to participate in the dedication of the Memorial to the dead at Sed el Bahr. MM. Legeret and Chevereau will photograph this film.

Microphone Boom Great Aid In Making Talking Pictures

ONE of the most unusual devices yet perfected to keep pace with the rapid development of sound pictures is the Microphone Boom, now being manufactured extensively by Mole-Richardson, Inc., designers and manufacturers of studio lighting and set equipment.

The Microphone Boom, a development of necessity, was originated and used by several of the Hollywood studios. Metro-Goldwyn-Mayer Studios enlarged and perfected the unit to some extent. Mole-Richardson engineers have since developed the Microphone Boom to its present high degree of efficiency. The Mole-Richardson product is used extensively by Metro-Goldwyn-Mayer, Pathé, Paramount Studios both in Hollywood and New York, R. K. O., Fox, Warner Brothers and other large studios.

The Mike Boom greatly simplifies the taking of sound on large sets, eliminating the necessity of placing a plurality of microphones. Particularly where the principals are required to change their respective positions is the Microphone Boom invaluable. It can be extended, withdrawn, elevated, lowered, or swung in circles.

Although Mike Booms are used most extensively on the studio set, they are now taken on most location trips, where they have been the means of solving many intricate and difficult situations.

Mole-Richardson reports that they just recently shipped two Mike Booms to France and one to England.

Other products manufactured by Mole-Richardson, Inc. are Inkies, incandescent lighting equipment, complete studio electrical equipment and Rolling Tripods. In their machine shops Mole-Richardson are rendering a special service to the motion picture industry, in the production of work of superior accuracy such as is required in special equipment for the talking picture apparatus.

Gold Fibre Screen

St. Louis—A new type of gold fibre sound screen is being manufactured by the Minusa Cine Screen Co. The screen is composed of the same products that is used for other Minusa materials.

THIRD DIMENSION WITH TECHNICOLOR

TECHNICOLOR experts, under the guidance of Mrs. Natalie M. Kalmus, art director of the company, are experimenting in the selection of shades that will produce third dimension effects on the screen. It is stated that the idea is working out with promise and that Technicolor soon will be able to make fat girls appear thin, and thin men sturdy.

Rosher Returns

(Continued from Page 14)

"Their sound equipment is equally fine. Many of the studios there use the Western Electric and R. C. A. Photophone systems, with installations quite identical with those in Hollywood; but there are also many fine European systems, like the British Acoustic, Gaumont-Petersen-Paulsen, and Tobis-Klangfilm systems, which are certainly inferior to none. The technique of European recording engineers has always been of marked excellence, as owners of foreign gramophone records already know, and this excellence is equally noticeable in their recording of sound-films by every system.

"Viewed as a whole, the European production situation is decidedly encouraging. More and more of the handicaps that have fettered its progress are being removed, and both technicians and executives are proving their ability and worth. And, in this connection it is interesting to note that Mme. Glyn is



Left, Clyde DeVinna; centre, Chas. Rosher; right, Rene Guissart at Elstree.

proving herself to be not only an exceptional writer, but an even more outstanding production executive. As one Hollywood writer prophesied before Mme. Glyn's departure from here, she has an exceptional picture mind, and since she has been able to have complete charge of her productions she has made a great success as a producer.

"I must admit, however, that I'm glad to get back to Hollywood. Having worked here so long, it seems like home to me. I'm glad to get back to my old friends in the industry, to revive the old friendships, and to be once again a part of the industry which I have seen grow from almost nothing to its present vast proportions."

Mr. Rosher is at present under contract to Metro-Goldwyn-Mayer, where he is now photographing "War Nurse," under the direction of Edgar Selwyn. He promises to write us a story soon. Meanwhile, this magazine, on behalf of the Society which it represents, and on behalf of the entire film industry as well, takes this opportunity to extend to him a hearty "welcome home!"



A scene from "Monte Carlo," a Paramount picture

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Making Up for Color

(Continued from Page 18)

absorption in the filter; and the image when reproduced through the blue-green filter eliminates the ground tone, due to its absorption quality of like colors, but accepts the lips and cheeks. It is for this reason that the colors of make-up must be in perfect harmony with the colors of the filters used so that a perfect rendition of color value will result.

The value of proper make-up for use in colored pictures cannot be sufficiently stressed. It is an inevitable feature that the cinematographer has to cope with, especially when groups of people have to be photographed. Make-up assists in giving a perfect balance for the proper rendition of color, and greatly simplifies the work of the cinematographer.

Mr. Factor has standardized the colors of make-up used for colored pictures. There are certain rules that one can follow to assure best results. For example, the density of any make-up color must be determined by the amount of light used, and the type of character to be portrayed. If a white costume is worn, the make-up can be lighter in color than that used if a dark costume is worn. For Western types and outdoor scenes the make-up can be slightly darker than that used for interiors.

The following outline is the color chart recommended by the Factor organization, and is proving very satisfactory.

Women

No. 5½ Grease Paint

No. 9 Face Powder

No. 22 Lining Color for shadowing the eye lids

Light Technicolor Dry Rouge for the cheeks

Light Technicolor Moist Rouge for accentuating the lips

Men

No. 7 Grease Paint

No. 16 Face Powder

No. 22 Lining Color for shadowing the eye lids

Dark Technicolor Dry Rouge for the cheeks

Dark Technicolor Moist Rouge for accentuating the lips

The above colors have been tested under the supervision of Mr. Factor and the foremost Technicolor cameramen at the various Studios and have been found to register most successfully on the sensitive film used for photographing colors.

The principles of applying the above make-up are the same as for applying other motion picture make-up, instructions for which are contained in our bulletin "Max Factor's Hints on the Art of Make-up" for motion pictures.

The reason that the above make-up is darker in shade than straight make-up is because of the necessity of intense lighting necessary to take up color values. If the make-up were any lighter, the lighting of the set would absorb all the color, and leave the subject expressionless.

The progress and value of make-up is attributed to the fact that it has a scientific background. It is not merely a question of Grease Paint, Powder, Rouge, etc., handed down from the past generation. It is now created through the medium of scientific and modern research methods.

"Shooting a Tractor"



Ray-Bell Films Producing Multicolor

INTRODUCTION of natural color photography in the industrial production field has been made by Ray-Bell Films, of St. Paul, Minnesota. This company is using the Multicolor process and from reports received they have been getting very worthwhile results. To date color films have been made of the following subjects: An operation using the famous "radio" knife; a Northern Pacific story on the famous North Coast Limited, including interior of the train; footage for the Caterpillar Tractor Company; scenes to be included in the Minneapolis Community Fund annual production; a sequence in the Pea cultivation for Reid-Murdoch Company; and numerous other short advertising specialties.

Columbia Borrows Elmer Dyer

ELMER DYER, A. S. C., has left for Lakehurst, N. J., where he will photograph the Akeley and aerial sequences for Columbia Pictures' big special, "Dirigible." Joe Walker, A. S. C., is in charge of the dramatic photography on the same picture. Dyer, who is with First National Pictures, was loaned to Columbia who desired him because of his great record as an aerial and Akeley cinematographer.

This is the eighth air story that Dyer has worked on, making Akeley shots from the ground, and every conceivable sort of shots from the air. Not so long ago Dyer did the air photography for Columbia on the picture "Flight." Columbia executives were so impressed with his work that they induced First National to let him do this for them.

Dyer has photographed air scenes in various sections of the North American Continent and has made a special study of atmospheric and light conditions in the air which makes him particularly valuable to any company on an air picture. When Dyer goes up in the air the director always knows that he will bring back the picture.

Dyer is now completing the fighting circle in pictures. He flew with the Army in "Dawn Patrol"; with the Marine Corps on "Flight." Now he will fly with the Navy on "Dirigible."

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Tilt Heads and Rolling Tripods

(Continued from Page 11)

disengages the tilt worm reduction gear and spur gear drive to the gear sectors on the table. If the blimp and camera are to be operated by the control wheel, the clutch is shifted to the left, connecting the worm reduction gear to the spur gear driving shaft.

The panning movement may be mechanically operated by the hand wheel on the left, as illustrated in Fig. 3. By withdrawing the locking plunger under the support plate, the panning action is made free. It will be noted that the hand-wheel controlling the passing movement may be moved to the right hand shaft extension, if desired.

By liberal use of ball and roller bearings, friction has been reduced to the minimum—a very essential feature in handling a camera when covering action.

In addition to the standard tripod, shown in Fig. 1, which supports the camera at a lens height of from 70½ inches high position to 48½ inches low position, an additional low tripod may be used when it is desired to operate from 48 inches lens heights. (See Fig. 4.) The low position of this auxiliary tripod is 37½ inches. If it is desired to operate at a still lower position, the tilt head may be mounted on a sectional high-hat, illustrated in Fig. 5, by adjusting the sections of which the camera may be lowered an inch at a time to a lens height of 20 inches from the floor.

By the use of these several units the camera may be operated at any desired height.

Experience has shown that 90 per cent of production photography may be made with the standard tripod.

For use with the type of blimps which are light enough to operate from a standard camera base, another type of rolling tripod of modified design (see Fig. 6) is available. This piece of equipment has proved popular in such studios as use these—may we call them—medium weight blimps.

Every change of production procedure has presented its problems. The camera booth was the first solution to the problem of silencing camera noise. The blimp has been a modification and its use has made necessary the equipment herewith described.

Until suitable silent cameras are available in quantity to meet the needs of the studios, it will probably be that blimps of some type will most ably meet the situation.

S. M. P. E. to New York

THE FALL Meeting of the Society of Motion Picture Engineers will be held at the Pennsylvania Hotel in New York, October 20-23, according to announcement by W. C. Kunzmann, Chairman of the Program Committee.

The time and place for the Fall Meeting was decided upon Tuesday at a meeting of the Board of Governors held at New York.

The program of papers and entertainment is already in preparation, according to J. I. Crabtree, President, and will be announced sometime next month.

Loyalty Begets Loyalty

N THE interest of their employees Mole-Richardson, Inc., designers and manufacturers of incandescent lighting equipment, have organized a Two Year Club among the mechanics in their shops. Those who have been employed by Mole-Richardson for two years, or one hundred and four weeks, are eligible for membership. Total membership now amounts to twelve.

Members of the club receive one week of vacation with salary. It is commonly understood that ordinarily mechanics are not granted vacations with salary.

Mr. Mole and Mr. Richardson believe that this intra-organization fraternity has accomplished much in building earnestness, loyalty and stability among their employees. This, they maintain, is further reflected in the high type of work that is steadily turned out by the organization.

Mole-Richardson, Inc., also manufacture various mechanical units for studio set work such as Microphone Booms, Rolling Tripods and many other products that have become vitally necessary since the inception of talking pictures.

Improved Sound Head

A NEW sound head that can be attached to any projector, and for which various improvements are claimed, has been developed by the Anderson Electric Sound Research Co., which has established demonstration headquarters at 1560 Broadway under the supervision of W. D. Anderson.

Arcturus non-microphonic photolytic cells are used in the sound head. This cell, due to its own creation of electrical impulses, does not require batteries, and power is double of any gas cell, it is stated. Life has not been determined, but the cell has been tested 1200 hours and did not show any loss. The cell is unbreakable, will not pick up stray electric impulses and there are no background noises. One preamplifier can operate two machines, thereby causing a saving.

The device can be attached complete to the projector in one hour. Very little service is necessary, and, since it does not run through the armature plate, the possibility of scratching is removed. The first installation is expected to be made in New York within a few weeks.

Have you ordered your
Cinematographic Annual?

WHEW!

R-K-O's unit making "The Silver Horde" has returned from Alaska, where it went to make some sequences, and it is reported the company was unable to fulfill its purpose because it was too hot to make pictures in Alaska!

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New Film Cleaning Firm

INAUGURATION of the first national film cleaning and processing organization is planned by Earl Denison, who has formed the Earl Denison Film Processing Co., with headquarters in New York City. Plants will be established in at least 12 key cities under the supervision of Denison, who on Aug. 9 ends his association with United Artists where he has been in charge of the prints department for the past two years.

The company's New York plant has already been equipped and the Los Angeles branch will be ready by Aug. 16. Territories in which plants are not located will be served by men working with portable machinery. Representatives of the company will conduct a free advisory service in connection with film problems. The firm will operate in the U. S. and Canada.

R. G. Hilton, who has been Denison's assistant at United Artists, will succeed him in charge of the films department.

Rome

THE FIRST sound-shorts produced at the Pittaluga studio in Rome were recently demonstrated to a numerous audience at the International Film Institute. One of these shorts illustrated a parade of 25,000 fascists in the vicinity of Rome: the speech of the Duce on this occasion, the hurrahs and the music were perfectly reproduced, it is stated. Another short-sound reproducing a concert of 20 harps

and 3 pianos was also claimed to be technically excellent.

W. E. Business Healthy

ALMOST two thousand Western Electric Sound Systems have been installed to date in the foreign field. The exact number, according to the latest installation report is 1996. This, with 4246 installations in the United States, brings the total up to 6242.

Contracts signed in the United States recently show an increase and indicate a healthy business revival. Among some of the contracts recently closed are: the Ki-He-Kah Theatre of Pawhuska, Okla., the New Strand of Ipswich, Mass., another of the Philip Smith houses, the Broadway of Tacoma, Wash., and the President of Los Angeles, two of the Fox West Coast Theatres, the Bijou and Imperial of La Crosse, Wis.; two houses of the La Crosse Theatres, Inc.; the Manor, Pittsburgh, Pa., a Warner Brothers house; the Flatbush in Brooklyn, a William Brandt Flatbush Theatres house and the American Theatre in Newark.

Newsreel Cops

A SECTION of Police cameramen has been instituted at the Vienna Central Police Station. It will be the duty of these cameramen to make special "shots" from some hidden place of all public events in which the local police play a part. These "shots" will constitute a so-called police newsreel, which will be demonstrated to the police administration in a special hall.



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by WILLIAM STULL, A. S. C.

ABOUT this time of the year my desk, already comfortably crowded, begins to be swamped with letters from amateurs everywhere, asking why this thing or that thing about their vacation film was not right. Probably the commonest complaint is that the amateur camera won't take as steady pictures as do those that make the professional films seen in the theatres. But why should they? A studio camera is mounted upon a tripod which may weigh anywhere from fifty to two hundred and fifty pounds—enough, in any case, to be perfectly steady—while the average amateur movie camera is held carelessly in the hands, and panned and tilted all over the landscape until even the quickest eye becomes discouraged with the pursuit. How can pictures made in such a manner escape being at least wobbly on the screen? No camera has yet been made that will give a steady picture from such an unsteady support; and until we mortals have developed a degree of steadiness vastly in excess of that which most of us enjoy, a tripod is the only logical guarantee of steady pictures.

But in addition to its assurance of steady pictures, a tripod is also a guarantee of decent pans and tilts. When a camera is held in the hand, and panned or tilted, nine times out of ten the movement will be so fast that no eye can follow the screened image comfortably. When we are actually looking at a landscape, our eyes can take in the view at a single, rapid glance; but when we are looking at a panorama of the same view on a motion picture screen, our eyes are vastly slower to accommodate themselves; they need time to focus, to see, and to telegraph their comprehension to the brain. Therefore, all pans or tilts must be made slowly—or, rather *slower* than what we think at the time is *too slow*. It is tremendously hard to do this when panning the camera in the hand; therefore a good, steady tripod equipped with a friction pan-and-tilt-head is absolutely essential. Even with this, unceasing care must be taken to make all pans slowly. The only possible exception to this rule is when fast-moving objects, such as animals, racers, etc., are being followed by the camera. In such cases, if the object is held centered in the picture, the speed of the pan is of no importance, for the eye concerns itself with the object itself, which is held stationary in relation to the picture's extremities, and not with the blurry, rapidly moving background which is of little interest.

Another important point to be remembered is that when the pan is arrested by some important object, the stop must be made very amply long, in order that the eye may easily see every bit of that object.

Camera Angles

A similar query concerns simple camera-angles. Not the intricate problems which are so disturbing to even trained cinematographers and directors, but the simple question of "How big a figure shall I try to get?" The only answer to this is that one should always try to get figures as large as is logically possible. In other words, if the figures are the most important things in the picture, fill the screen with them; if they aren't, subordinate them to whatever is most important. For example, if you are photographing one of the immense Redwood trees, the figures of the people are only important as yardsticks by which the size of the tree may be judged, and should therefore be made small, while the tree dominates the scene. On the other hand, if the most important object in the scene were a golfer, fill the screen with him, and let the tree go hang. But in such a scene, filling the screen with a figure must be accomplished with due consideration to the figure's extreme movement during the scene. A golfer isn't interesting if his stroke ends somewhere off the screen. Therefore, a happy medium, dictated by logic, must be found. The best procedure is to borrow a leaf from the professional's book, and make several "takes" of the scene. First, establish the geography of the scene in a long-shot; then move progressively closer in the succeeding "takes" until you have reached the closest shot that can logically be made. This method involves more work, more time, and more film, as each "take" should include the complete action of the scene; but it is well worth it, for it gives unbounded freedom in cutting the finished picture.

Of course, this business of getting big figures can be carried to an extreme. All too frequently I have seen amateurs trying to photograph groups by waving the camera at them in the manner of a garden-hose. In nearly all such cases, had the photographer been content with only slightly smaller figures, and stepped back but two or three paces from his subjects, he could have included the whole group in a single, steady shot.

Impromptu, or Staged?

Another question that most amateurs eventually ask is whether their scenes should be impromptu or staged. The latter, by all means. No scenes should be shot under normal circumstances until everyone concerned—actors and cinematographer alike—know exactly what is to be done, and how it is to be done. Of course, most ordinary scenes do not require the formality of an elaborate script and extensive rehearsals, but they deserve at least one rehearsal before

(Continued on Page 40)

Professional Amateurs

Conrad Nagel Records Pleasures with an Eyemo

by WILLIAM STULL, A. S. C.

A FAMOUS humorist recently remarked that the private life of a screen star was very like that of a goldfish. Concealed in this *bon mot* there is a great deal of truth, for keeping oneself before the public eye is a vital part of the work of those who, like screen players, derive their livelihood from their appeal to the public fancy. None the less, there are some members of the acting fraternity who, strange as it may seem, regarding themselves as human beings first, and as actors only secondarily, feel themselves entitled to enjoy an undisturbed and unpublicized home life quite as much as the rest of us. And when they back up this attitude with unquestionable acting ability during their business hours, they somehow seem to succeed none the less.

Such a person is Conrad Nagel. Despite the fact that he considers his home life very much his own affair, he is one of the most popular—and therefore

one of the busiest—of stars. Perhaps that is one of the reasons why he guards his privacy so zealously, for working as earnestly, and continuously as he does—sometimes playing in two, or even three pictures at once—he can have but scant time to devote to his family. Therefore, though the world knows him as one of the most polished of actors, and as the man whose distinguished bearing and diction were one of the greatest factors in making talking pictures popular, it does not know him as the attentive husband and father, and as the versatile and cultured gentleman which he also is. It does not know that he is likewise an exceptional public speaker, an authority on musical matters, and an enthusiastic amateur cinematographer.

Like many other screen people, Mr. Nagel became interested in making personal movies long before the 16 mm. cameras came on the scene. "You see," he



Mr. Nagel using his Eyemo on the set at Universal.

says, "it all began when I had a regular projection room built into my home. Like a lot of the others, I used to run pictures there for myself and my friends very frequently. But it was not only an excellent means of entertainment, but a very important aid to my own work before the camera, for I could see these pictures at my leisure, and study them. In that way I could not only analyze my own work, but that of others, as well, and from it all learn how to improve my make-up, timing, and technique in general.

"From that start, it was inevitable that I should occasionally want to make some pictures myself. So I bought an *Eyemo*, and began. Most of the pictures I make are just the ordinary run of family films, naturally. Just the same sort of things that every other amateur enjoys making—scenes of my wife and my little girl at home, at the beach, and on our boat; my daughter's parties, and all that sort of thing. It's something that we can all enjoy, you know, and, best of all, it makes it possible for us to revive these pleasant memories at any time. Why, I've got movies of my little girl's first—but that's rather beside the point, isn't it? There are thousands of other proud fathers who have just the same sort of pictures of their daughters' first steps, first parties, and first everything else—and I'm just like the rest of them.

"Like everyone else who buys an amateur movie camera, I was at first satisfied to make a disconnected series of animated snapshots, but I soon learned that, to be of lasting interest, an amateur movie must be as carefully planned and executed as a professional one. There, my experience in the studios stood me in good stead, and enabled me to know how best to plan my little films. Of course, I don't use a rigid script when I make these little pictures, but I do make it a rule never to take my camera out unless I've a very definite idea of what I'm going to photograph. Every picture must have some sort of a motivating idea behind it, and that idea must be kept in mind all through the photographing of the scenes, and in the editing and titling as well. In this connection, one point that I've always tried to impress upon my *Filmo*-owning friends outside the industry is that the idea must be developed completely. There is often no substitute for the scenes that you forgot to photograph; therefore it is best to get them thoroughly while you can, even if it involves a little trouble, or the use of a few extra feet of film. If a picture is worth making at all, it is worth making well, and an incomplete picture is not a well-made one, is it?

"At present I'm still using my original *Eyemo*, but since the talking pictures have come, and I have been unable to run talkies at home, I've been thinking



Mr. Nagel using his *Eyemo* in his home.

seriously of changing to 16 mm. standard. Many of my friends own *Filmos*, you know, and since the other day, when Jackson Rose, who is photographing my current picture, *The Lady Surrenders*, brought his new 70-D *Filmo* onto the set to get some scenes of us for his own library, I've been thinking 16mm. more than ever. Jack was good enough to let me use the camera a bit, and I'm certainly amazed at the number of refinements and conveniences embodied in it. That multiple speed movement, for instance, is something that I've always wanted—and then there is the immense convenience of being able to get your films anywhere. The reversal film is another great convenience, too, and the fact that with it you can be sure of getting the very best laboratory work wherever you are is another important thing. But the thing that interests me most is the possibility of making my own natural-color films. Half the beauty of the pictures I make of my little girl is lost because I cannot make them in color with my *Eyemo*, so I think that very soon I'll be trying my hand at *Kodacolor* work.

"The only drawback to abandoning the 35 mm. standard is that it will prevent my adding to my library of scenes from the pictures I've worked on.

(Continued on Page 38)

Zeiss Tessar

No camera can be better than its lens. All Carl Zeiss Tessars ensure perfect definition and brilliancy, even at full aperture, and results will not be impaired by flare. These are only a few reasons why Carl Zeiss Tesser Lenses have universal endorsement



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Improving Home Movies

"How can I improve my picture making?"

A dozen times a week the above questions comes to the desk of this writer.

"My stuff looks terrible," writes one reader. "I do not seem to get the proper angle in any of my shots. What can I do to improve?"

Rather a large order. Of course, good photographers are born. Very few are made. However, that is no reason why most of the users of the 16 millimeter cameras should not at least get fairly good looking pictures from the point of composition. After all, composition is the biggest thing in the matter of beautiful photography, and too few of us made a determined effort to acquire this art. Some of us never will be able to acquire it, because we do not have that certain something within us that makes easy the task of learning how to compose our pictures.

There are many published works on the art of composition which, if intelligently studied, will certainly help the amateur a great deal. This writer's advice is to secure such books and make a real attempt to learn something from them. Many times, of course, the writer has been too technical and the reader gains nothing but a confusing mass of information that leaves him nowhere in particular and in a still more befuddled condition. While we do not intend this article as a sales talk for the Cinematographic Annual, we would advise the purchase of this book and the careful perusal of the splendid article written by Mr. Stull, who conducts the amateur department of this magazine. Mr. Stull has given us an unusually excellent piece of work that is so simply worded as to be readily understood by all. He makes simple the things that are usually so difficult to understand.

There is another great opportunity that is sadly neglected by most of the amateurs. It is the neighborhood movie theatre. Intelligent use of these theatres will do much to improve the quality of your work. By this, we mean that if the home movie makers will go to the theatres and study the pictures photographed by the finest cameramen of the industry they will by careful observation be able to see just wherein they (the home movie makers) have slipped in making the picture of the beach party the week before.

Look at your own latest cinematographic effort. Then in the theatre compare it with similar shots in the professional picture. It is not difficult. You shoot a scene on the beach. You do not like it. Pick a picture that has beach shots in it. Look them over and see what the professional did to make his scenes effective. Maybe it was the foreground. Maybe some object used to frame his picture. Then go home and look at your own picture again and you will jolly well soon see just what it was you did that was wrong.

The same is true of interiors. Your picture shot in the living room of your own home seems flat and unbalanced to you. Go to any picture and see what the cinematographer has done in the framing and composing of his interior scenes in a living room. Forget the story and concentrate upon the cinematography. Make notes in your notebook. Perhaps it was a palm here, a sofa there, a lamp, a fireplace or

(Continued on Page 41)



Ambassador Uses Cine-Kodak

Above we have United States Ambassador Sackett, photographing his guests at the American Embassy at Berlin, during a reception he gave on the Fourth of July. He uses his Cine-Kodak on every possible occasion.

Drem's New Connector

THE DREM Product's Company has given the amateurs another very worthwhile product in the new Drem Connector, which has just been announced.

This connector is a time and labor, and patience, saving device which instantly locks your camera onto your tripod by a simple turn of two little buttons. Your camera is always on properly and you avoid the upsetting difficulties so often found in attempting to screw the camera onto the tripod.

It is very advisable to use a tripod on many occasions. It is a nuisance to screw the tripod into the socket, and many times when you have finished the camera points in the wrong direction. The Drem Connector is composed of two flat discs. One is screwed firmly into the tripod socket. The other onto the bottom of the camera. Then, when you wish to use it, you simply slip the camera onto the tripod so that disc fits into depression, turn two buttons and the job is done. This product, made by the same people who distribute the universal cinematic exposure meters, Cinophot, for all cine cameras, and Dremophot for Filmos, is a workmanlike piece of apparatus.

TRUEBALL TRIPOD HEADS

Model B
The Model B is for Bell & Howell and Mitchell Cameras and their respective tripods.

The handle is telescopic and adjustable to any angle.



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Professional Amateurs

(Continued from Page 35)

Many of my friends, who own 16 mm. cameras, have brought their cameras onto the set and made their own films of their fellow-players; that is very interesting indeed, but it seems to me that it would tend to take the player's mind from the concentration upon his part which he so sorely needs. Therefore I've always done differently, and have instead relied upon the kindness of the cutters to furnish me with such scenes. In every picture, you know, scores of scenes are shot which are not used in the finished picture; the cutters are always willing to let us have some of these unused scenes, and so I've been able to build up a very interesting library of scenes from my pictures this way. By getting the scenes this way, I not only am able to concentrate more completely upon my work, but I also get better scenes for my library. Of course, I'm rather proud of my own ability with my *Eyemo*—but I know that I am, after all, just an amateur, and by no means in the class with the professionals who photograph our pictures.

"And since I am, after all, only an amateur, I can really add nothing to the excellent advice to amateurs which has appeared in the AMERICAN CINEMATOGRAPHER. On the other hand, however, I hope that I'll be pardoned if I say a word or two to the amateur actors who appear before your readers' cameras. Almost all of us are to some greater or lesser extent actors, whether we realize it or not, for one of the most deeply rooted of Humanity's instincts is to act, to "show off," to get away from ourselves, to lose ourselves in some other character. The actor in an amateur picture must fully realize this, and be prepared to give this instinct full play, if he is to enjoy the greatest pleasure from his efforts, and if he is to be successful. He must, to a large degree, be conscious of the fact that he is acting.

"But to be conscious of this, he must first know what acting is. I think that the best definition of acting was that given by Joe Jefferson, who said, "Well, when I talk, you listen; and when you talk, I listen." To an actor there is a volume of wisdom packed into that sentence. The most important part of acting does not always come during our own speeches, but often occurs while someone else is speaking, and we are merely listening. It is just as important for an actor to listen to what the other speaker is saying as it is to speak his own lines. The finest scene that has ever been written can be spoiled by an actor who is not listening attentively during the time he himself is not speaking.

"The basis of all acting is contained in one line of Hamlet's speech to the players, when he says, "Suit the action to the word, and the word to the action." That, of course, is easily done on the stage, or in a talking picture, but it cannot be done in a silent picture, such as we amateurs must make, since during the time the actor is speaking the film is cut and a printed title inserted. Therefore, any action you wish to use must necessarily precede or follow the speaking; otherwise it will be cut out, or at least broken, where the title is inserted.

"The most important thing about any perform-



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ance is sincerity. The next most important thing is an entirely technical element—timing. The great difference between the performances of the professional and amateur actor is almost entirely one of timing. The amateur learns his lines and hurries through them while the professional actor has acquired the ability to tell as much by his pauses—or timing—as with the actual words or gestures he may use. Timing is as important a part of acting as tempo is in music, or punctuation in literature.

"During recent years—largely through the influence of the motion picture—there has come into being what is called the school of natural acting. This is rather a misnomer, for, as George Arliss has truly said, the job of the actor is not to be natural, but to be unnatural without getting caught at it. One important trick in this connection, which all amateur cameramen, directors, and players should remember, is never to be too obvious; appeal to the imagination of your audience. Make it work wherever it is possible.

"All of this naturally points to the fact that, wherever possible, all action taking place before a camera should be well rehearsed. It is a great mistake to start out by setting up the camera and shooting the scene immediately. Even in the simplest "record pictures" of family outings, and so forth, the action of each scene should be run through at least once before photographing. It helps the actors—and everyone who appears before the camera *is* an actor—and it helps the cameraman. By going through the action just once or twice before shooting, things are vastly simplified, for everyone will know just what to do, and what to expect, during the actual photographing. And an amateur dramatic picture should be just as painstakingly rehearsed as any play. In amateur or professional film work alike, thorough preparation and absolute concentration must always be the keynote."

Filmo Tripod Supports Weight of 240 Pound Man

A REMARKABLE test of the unusual strength and sturdy construction of the new B&H Filmo All-Metal Tripod was recently made at the Bell & Howell offices in Chicago.

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The fact that the tripod is ordinarily used to support a 4½-pound camera indicates the tremendous reserve strength which its designers have built into it.

Japan

THE CINEMA is a very popular entertainment in Japan. The sound film is progressing there better than in many European countries. There are 12 wired cinemas in Tokio. The shows run from 1 P. M. to 10 P. M. Japan is the only country in the world, with the exception of Germany, which is able to successfully compete with American films on its domestic market. In fact, of every 100 films exhibited in the country, 80 are of Japanese origin. There are six large and a number of small producing firms. Japan can boast of 12 film papers or magazines, 2 of which are dailies.



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Amateur Moving Making

(Continued from Page 33)

they are filmed. This does not, as some have feared, take the spontaneity away from the action; but it does add polish to it. Without rehearsal, one may easily find in the middle of a scene that the timing of certain action is wrong, or that one actor, at some time or other, completely hides another from the lens, or—worst of all—that the intended action is too long for the footage available. A single rehearsal will cure these obvious ills, and a number of other less noticeable ones, as well. And it should make your actors take the business of acting for you much more seriously.

Vacation films that purport to be really complete records of the holiday should, of course, be largely staged. In the first place, it would be almost impossible to make a cinematically satisfactory record of many of the actual happenings, and in the second place, they would rarely be so interesting as the carefully staged "pseudo-version" can be. Therefore, though you use the actual happenings as a framework or skeleton for your film, decorate it with the best you can conceive and execute in the matter of story, direction, acting, and cinematography. Above all, do not forget that your camera itself can be more effective than many a title; never plan to bridge a gap with a title where some truly cinematic effect can turn the trick. You will naturally want your films considered "clever;" but remember that cleverness consists in avoiding the obvious, but not in being affectedly "arty." Your primary business is to tell a story, interestingly and directly; if the telling can be improved by recourse to the advanced cinematics of Lubitsch, Dreyer, and Eisenstein, so much the better—if you can feel yourself technically able to try such things. Remember that between the "May Irwin Kiss" and the Montage of Eisenstein the film industry had first to master the naturalness of Griffith and the simplicity of Vidor. It could not be hurried in its development; no more can you. Before an engineer can design a great bridge, he must pass through grade-school, high-school, and college—so go to your cinematic grade-school in your own projection-room. Let your own films teach you your shortcomings; let your mistakes teach you how to avoid repeating them in the future. Use your mistakes—don't let them use you!



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Daddy of the Prologue

(Continued from Page 15)

"Too much of any one thing grows monotonous to the public, even as prologues did just before talking pictures came along to rescue the picture business from sleeping sickness. Henceforth, the Warner Brothers will strike a happy medium in presenting dancing numbers on screen and stage. This will certainly make for a continuous freshness in my own work; therefore I welcome it."

Ceballos is one of the quietest of directors. He seldom raises his voice to his chorus girls and boys,—and very rarely in anger. As a result he is naturally popular with his employees, most of whom have been with him for the past two or three years, in pictures and prologues.

He still has most of his original chorus which began at the Warners' Hollywood Theatre two years ago, and which electrified blasé old Broadway in "Fifty Million Frenchmen" when it opened in New York last season. Around this basis of a tried-and-true chorus, Ceballos has trained hundreds of girls who eagerly return to his banner whenever he calls. At one time when the big revues were in vogue in pictures Ceballos had as many as two hundred girls under contract at Warner Brothers and First National studios. In his present prologues he employs three complete choruses of approximately twenty-four girls and twelve boys in each. Although the chorines cannot hope to earn as many shekels in stage prologues as they did in pictures, they will find steadier employment.

"It is much harder work," agreed Ceballos. "In pictures the girls had seven to ten days to rehearse one routine, while they must learn four dance routines in a week for my stage prologues.

"And, believe it or not, they seem to like it. At least, these kids have all the pep and enthusiasm in the world."

This writer certainly agrees with the dancing maestro on this point. His choruses of California girls have always been noted for their youth, beauty, pep and dancing ability.

"The typical chorus girl of today is far different from the chorine of yesterday. This is mostly due to the influence of pictures. And, California life. Here the normal outdoors life preserves a girl's youth, beauty and dancing ability. A dance producer can have his pick of hundreds of girls, who are positively youthful pippins. And, they are above the average in intelligence, usually well-reared and well-educated. It's a pleasure to work with them."

Since the local newspaper critics have been raving about Ceballos' prologues at the two Warner theatres, I ventured to inquire why prologues ever went out of popularity.

"They were overdone," replied Ceballos candidly. "Not enough attention was paid to the public who came to see a picture as well as a prologue. My prologues will be brief and snappy. I am using picture introductions, instead of masters of ceremonies. I am keeping the orchestra in the pit. Audiences trained to watch a picture screen want continuity in their entertainment. I am following this line in staging spectacles and color effects, as well as specialty num-

bers. Swift, smooth movement and quickly changing tempo. There are no stiff lines of chorus girls. All movements have depth as well as width. In other words, I am striving for a perfect miniature revue."

Improving Home Movies

(Continued from Page 36)

what not. Then compare it with your own interior scene and you will at least be able to make some improvement in your own work.

Watch for odd and unusual shots in the professional pictures. Shots that make you gasp with delight at their sheer beauty or thrill. Then see what you can do in the way of making similar shots in the next picture you make. Perhaps it is an unusual angle. Try one yourself. You may surprise yourself by the unusualness of your own film.

Take, for example, the matter of lighting. There are not many amateurs who can light a subject properly without instruction or long experience. However, if you study the pictures you see in the theatres you will gain a great deal. You will not see the lights, of course. But you will see how the subjects have been lighted. Such pictures as "Anna Christie" are excellent examples for the home movie maker to study. Most of us are prone to use too much light. We lose the beauty that may be secured with more intelligent lighting. You must recall some of those scenes in the Garbo film where the most realism was secured. "The King of Jazz" is another picture that might well be studied, especially by those of you who like to use Kodacolor.

—H. H.

Bell & Howell Get Ufa Pictures

BELL & HOWELL has acquired more than 120 super-educational 16 mm. films from Ufa for addition to its Filmo Library. The pictures cover practically every field in the scientific and educational world, and 52 of them have sound-on-disc accompaniment in the form of lectures by American educators. The pictures are suited for the Project-O-Phone, portable sound film projector recently announced by Bell & Howell.

Duty on 16 mm. Lifted

THE new tariff may have caused a difference of opinion among amateur movie makers as citizens, but there can be no question of its benefit to them as movie makers who travel abroad. Under the terms of the act recently passed, amateur motion picture film taken abroad and exposed in foreign countries may be brought into the United States duty free, whether developed or not, provided the films are of American manufacture and provided they are not to be used for commercial purposes.

This has not been the case heretofore, and amateur movie makers have consequently been more or less annoyed because strict interpretation of the law held their films subject to comparatively heavy duty. At the time when the Fordney-Macomber tariff bill was passed (1922), 16-mm. film and the specifically amateur equipment that is now in such wide use had not yet been offered to the public. Virtually the only motion picture film imported was film of standard width for commercial use in this country.

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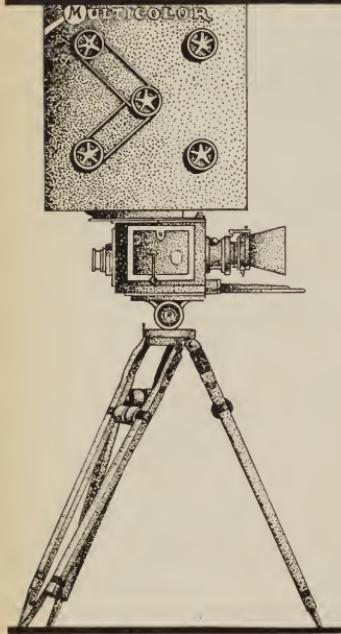
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Mitchell Wide Film Cameras

were used in shooting the following pictures:

BILLIE THE KID	-	Metro-Goldwyn-Mayer				
THE FOX FOLLIES	-	-	-	-	Fox	
HAPPY DAYS	-	-	-	-	-	Fox
THE BIG TRAIL	-	-	-	-	-	Fox
SONG O' MY HEART	-	-	-	-	-	Fox

Others preparing.

The MITCHELL WIDE FILM CAMERA was selected by the producers of these pictures as it is a camera of proven quality.
Prompt delivery can be made of 70 MM Cameras.

If a standard for wide film of less than 70 MM is established within one year from July 1st, 1930, we will make the changes required on our 70 MM camera to meet such standard, if desired, for purchasers of our regular 70 MM camera, purchased within that time, free of any charges.

If any size, other than 70 MM, is desired, we can furnish cameras on short notice.